APPENDIX A

REASONABLY AVAILABLE CONTROL TECHNOLOGY ANALYSIS

Bexar County Moderate Nonattainment Area Reasonably Available Control Technology State Implementation Plan Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard

Project Number 2023-132-SIP-NR

This page intentionally left blank

TABLE OF CONTENTS

1 Introduction
2 RACT Evaluation Approach
  2.1 General Discussion
  2.2 Identification of CTG and Non-CTG Emission Sources
  2.3 Determining if State Regulations Fulfill RACT Requirements
3 RACT Determination and Discussion
  3.1 General Discussion
  3.2 NO_x RACT Determination
    3.2.1 30 TAC Chapter 117 NOX Rules
      3.2.1.1 Major Sources
  3.3 VOC RACT Determination
    3.3.1 30 TAC Chapter 115 VOC Rules

1 INTRODUCTION

Bexar County was originally designated nonattainment with a marginal classification for the 2015 eight-hour ozone National Ambient Air Quality Standard (NAAQS) of 0.070 parts per million with a September 24, 2021 attainment date.[1] Based on monitoring data from 2018 through 2020, Bexar County did not attain the 2015 eight-hour ozone NAAQS in 2020 and did not qualify for a one-year attainment date extension in accordance with federal Clean Air Act (FCAA), §181(a)(5).[2,3] On October 7, 2022, the United States Environmental Protection Agency (EPA) published a final notice reclassifying Bexar County from marginal to moderate with a September 24, 2024 attainment date and a 2023 attainment year. The final action was effective November 7, 2022 (87 Federal Register (FR) 60897).

Nonattainment areas classified as moderate and above are required to meet the mandates of the FCAA under §172(c)(1) and §182(b)(2) and (f). According to the EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements: Final Rule* (2015 eight-hour ozone standard SIP requirements rule) published on December 6, 2018, states containing areas classified as moderate ozone nonattainment or higher must submit a SIP revision to fulfill the RACT requirements for all control techniques guidelines (CTG) emission source categories or alternative control techniques (ACT) and all non-CTG major sources of nitrogen oxides (NO_X) and volatile organic compounds (VOC) (83 FR 62998). Further, this SIP revision must contain adopted RACT regulations, certifications where appropriate that existing provisions are RACT, and/or negative declarations that there are no sources in the nonattainment area covered by a specific CTG source category. The major source threshold for moderate nonattainment areas is a potential to emit 100 tons per year (tpy) of either NO_X or VOC. The 100 tpy major source threshold applies in Bexar County. This appendix provides the Texas Commission on Environmental Quality's (TCEQ or commission) analysis of the sources and the applicable rules to demonstrate that the state is fulfilling the moderate RACT requirements for Bexar County.

RACT is defined as the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762, September 17, 1979). RACT requirements for moderate and higher classification nonattainment areas are included in the FCAA to ensure that significant source categories are controlled to a reasonable extent but not necessarily to best available control technology (BACT) levels expected of new sources or to maximum achievable control technology (MACT) levels required for major sources of hazardous air pollutants.

While RACT and reasonably available control measures (RACM) have similar consideration factors like technological and economic feasibility, there is a significant distinction between RACT and RACM. A control measure must advance attainment of the area towards meeting the NAAQS for that measure to be considered RACM. Advancing

[1] Bexar County was designated nonattainment for the 2015 ozone NAAQS effective September 24, 2018, after most of the rest of the country (83 FR 35136, July 25, 2018).
[2] The attainment year ozone season is the ozone season immediately preceding a nonattainment area's attainment deadline.
[3] An area that fails to attain the 2015 eight-hour ozone NAAQS by its attainment date would be eligible for the first one-year extension if, for the attainment year, the area's 4th highest daily maximum eight-hour average is at or below the level of the standard (70 parts per billion (ppb)); Bexar County's fourth highest daily maximum eight-hour average for 2020 was 74 ppb as measured at the Camp Bullis C58 monitor. Bexar County's design value for 2020 was 72 ppb.

attainment of the area is not a factor of consideration when evaluating RACT because the benefit of implementing RACT is presumed under the FCAA.

2 RACT EVALUATION APPROACH

2.1 General Discussion

The TCEQ developed this Bexar County area RACT determination in two parts, both of which concern the identification of what sources are subject to RACT in the Bexar County area. There are two types of sources subject to RACT, presumptive RACT and major source RACT. Presumptive RACT applies RACT guidelines that are prescribed separately in specific EPA guidance documents known as control techniques guidelines documents (CTG) or alternative control techniques documents (ACT). Each CTG or ACT applies to different source categories based two whether or not the source meets the two following criteria: whether the specific business activities that are conducted within the ozone nonattainment area meet the specific applicability definition and whether or not the source meets the CTG or ACT minimum applicability threshold.

The TCEQ also determined what sources are subject to major source RACT. Major source RACT applicability is determined by the major source threshold, which changes based on the area's ozone nonattainment classification. Sources subject to major source RACT must meet various new emissions limits that are determined by TCEQ to be economically and technologically feasible. The major source threshold applicable in moderate ozone nonattainment areas is 100 tons per year (tpy), and TCEQ emissions inventory screening criteria to identify sources within Bexar County major sources that have uncontrolled actual or potential emissions of any combination of VOC or NO_x of equal to or greater than 50 tpy. TCEQ demonstrates that all presumptive and major source RACT requirements associated with a moderate classification are fulfilled in Bexar County by identifying:

- all CTG source categories of VOC emissions and submitting negative declarations for categories where there are no emission sources within Bexar County;
- all alternative control techniques (ACT) source categories of NO_x emissions;
- all non-CTG major sources of NO_x and VOC emissions; and
- the state regulation that implements or exceeds RACT for each applicable CTG source category or non-CTG major emission source; and describing the basis for concluding that these regulations fulfill RACT.

Bexar County RACT regulations (Rule Project No. 2023-116-115-AI and Rule Project No. 2023-117-117-AI) are being proposed concurrent with this proposed SIP revision. The compliance date for the proposed rules applicable in the Bexar County 2015 ozone NAAQS nonattainment area, if adopted, would be January 1, 2025.

2.2 Identification of CTG and Non-CTG Emission Sources

The EPA has issued CTG documents defining presumptive RACT for existing facilities. The EPA has also issued ACT documents that describe available control technologies but do not define presumptive RACT levels. The commission reviewed the EPA's CTG and ACT documents to identify all source categories of NO_x and VOC emissions that require RACT. RACT determinations for non-major VOC emission sources are not required if there are no facilities in an applicable area that are subject to a CTG or ACT document. A list of CTG source categories for which the commission is submitting a negative declaration is provided below in Section 3.3 *VOC RACT Determination* for source

categories described within the EPA guidance documents that do not exist in Bexar County.

The TCEQ reviewed the point source emissions inventory and Title V permits for sources in Bexar County to identify all major sources of NO_X or VOC emissions. Since the point source emissions inventory database reports actual emissions rather than potential to emit, the TCEQ also included in this RACT analysis sources that reported actual emissions as low as 50 tpy of NO_X or VOC to account for the difference between actual and potential emissions.

2.3 Determining if State Regulations Fulfill RACT Requirements

Staff used both EPA's recent CTG and ACT VOC RACT guidance and VOC RACT determinations from current RACT rules for other Texas ozone nonattainment areas to serve as the basis for the commission's proposed new RACT rules for Bexar County. The commission is proposing to expand the applicability of portions of rules in 30 Texas Administrative Code (TAC) Chapters 115 and 117 to apply in the Bexar County 2015 ozone NAAQS nonattainment area. The EPA has approved these rules for other ozone nonattainment areas, and the TCEQ asserts that the rules, when applied to Bexar County, will meet FCAA RACT associated with a moderate nonattainment classification.

Between 2006 and 2008, the EPA issued 11 CTG documents with recommendations for VOC controls on a variety of consumer and commercial products. The EPA approved revisions of 30 TAC Chapter 115 rules addressing these CTGs in 2014 for offset lithographic printing in the DFW, El Paso, and HGB nonattainment areas (79 FR 45105, August 4, 2014). Then in 2015, the EPA approved 30 TAC Chapter 115 rule revisions as meeting RACT requirements for the remaining CTGs under the 1997 eight-hour ozone NAAQS (80 FR 16291, March 27, 2015). In 2017, the EPA approved the 30 TAC Chapter 115 rules as meeting FCAA RACT for the DFW area's moderate nonattainment classification under the 2008 eight-hour ozone NAAQS (82 FR 60546, December 21, 2017).

In 2014, the EPA approved the 30 TAC Chapter 115 rules for VOC storage tanks as meeting the FCAA RACT requirements (79 FR 53299, September 9, 2014).

State regulations in 30 TAC Chapter 115 that implement the controls recommended in CTG or ACT documents or that implement equivalent or superior emission control strategies were determined to fulfill RACT requirements for any CTG or ACT documents issued prior to 2006 for the nine-county DFW 1997 eight-hour ozone nonattainment area.

The TCEQ reviewed EPA's existing VOC CTG and ACT documents to identify the source categories that must be regulated. The *Control Techniques Guidelines for the Oil and Natural Gas Industry* (EPA-453/B-16-001 2016/10) represent the most recent CTG control document that EPA has published. On June 30, 2021, the commission adopted revisions to 30 TAC Chapter 115 to implement RACT rules for this CTG to be applicable in the HGB and DFW nonattainment areas (Project No. 2020-038-115-AI). On August 15, 2023, the EPA approved this RACT determination (88 FR 55379).

Title 30 TAC rules that are consistent with or more stringent than controls implemented in other Texas nonattainment areas were also determined by the TCEQ to fulfill RACT requirements. A comprehensive list of approved state rules and rule approval dates can be found in 40 Code of Federal Regulations (CFR) §52.2270(c). BACT is an emission standard that is based on the maximum degree of emission reduction achievable and is

at least as stringent as the emission standards set by any applicable FCAA provisions. MACT is an emission standard that requires the maximum reduction of hazardous emissions and is at least as stringent as the average emission level achieved by controls on the top 12% of existing sources in the applicable source category. Therefore, emission sources subject to BACT or MACT requirements were determined to also meet RACT requirements.

The TCEQ reviewed the emission sources in Bexar County along with potentially applicable rules to verify that all CTG or ACT emission source categories and non-CTG or non-ACT major emission sources in Bexar County were subject to requirements that meet or exceed the RACT requirements associated with a moderate ozone nonattainment classification.

3 RACT DETERMINATION AND DISCUSSION

3.1 General Discussion

Under the current state rules and concurrent proposed rulemakings for 30 TAC Chapter 115 and 30 TAC Chapter 117, Bexar County is or will be subject to VOC and NO_X emissions control for many source categories.

This RACT analysis demonstrates that all CTG and ACT emission source categories addressed by CTG and ACT documents issued prior to 2022 and all major VOC and NO_X emission sources in Bexar County are already or would be subject to rules required to meet moderate classification RACT requirements based on existing rules or other federally enforceable measures that meet or exceed RACT requirements; rules proposed in the concurrent 30 TAC Chapters 115 and 117 rulemakings(Project Nos. 2023-116-115-AI and 2023-117-117-AI); or a finding that further emission controls on the sources are either not technologically or economically feasible. Tables A-1 through A-5 support the results of the RACT analysis.

Table A-1: *State Rules Addressing NO_X RACT Requirements in ACT Reference Documents* provides the emission source categories, the ACT reference documents, and the state rules addressing the RACT requirements for sources in the NO_X ACT documents. Table A-2: *State Rules Addressing VOC RACT Requirements in CTG Reference Documents* provides the emission source categories, the CTG reference documents, and the state rules addressing the RACT requirements for sources in the VOC CTG documents. Table A-3: *State Rules Addressing VOC RACT Requirements in ACT Reference Documents* provides the emission source categories, the ACT reference documents, and the state rules addressing the RACT requirements for sources in the VOC ACT documents. Negative declarations are provided for emission source categories that, based on information available to the TCEQ, either do not exist in Bexar County or exist but do not meet the applicability criteria recommended for controls, e.g., sources with a potential to emit less than the recommended exemption thresholds. Table A-4: *State Rules Addressing NO_X RACT Requirements for Major Emission Sources in Bexar County* lists the major stationary emission sources with actual or potential NO_X emissions exceeding the 100 tpy major source PTE threshold. Table A-5: *State Rules Addressing VOC RACT Requirements for Major Emission Sources in Bexar County* lists the major stationary emission sources with actual or potential VOC emissions exceeding the 100 tpy major source PTE threshold in Bexar County.

The major source tables (Table A-4 and Table A-5) provide the emission source regulated entity reference number (RN), company name, standard industrial classification (SIC)

code, a brief description of the source, and the reported annual emissions (in tpy). The tables also include either the state rules satisfying the RACT requirements, the permit requirements that limit emissions, or the reasoned justification for why controlling the emissions is not considered RACT.

3.2 NO_X RACT Determination

3.2.1 30 TAC Chapter 117 NO_X Rules

The Chapter 117 rules represent one of the most comprehensive NO_X control strategies in the nation. The TCEQ reviewed the 2019 point source emissions inventory to determine the RACT requirements for major sources of NO_X in the concurrent proposed rulemaking where existing requirements may not satisfy RACT. The current EPA-approved Chapter 117 rules and those requirements in the concurrent proposed rulemaking would fulfill RACT requirements for ACT NO_X source categories that exist in the Bexar County ozone nonattainment area and all NO_X major sources in Bexar County. Some sources would be transitioning from rules applicable in attainment counties to more stringent rules for nonattainment areas.

Changes are proposed to Chapter 117 to add requirements for industrial sources other than cement kilns, including boilers, process heaters, engines, and gas turbines; new requirements for utilities, including boilers, gas turbines and duct burners; and amended requirements for cement kilns.

Table A-1 provides additional details on the ACT source categories. For non-ACT major NO_X emission sources for which NO_X controls are technologically and economically feasible, RACT is fulfilled by existing source-specific rules in Chapter 117, other federally enforceable measures, and by new rules included in the concurrent proposed Chapter 117 rulemaking.

Additional NO_X controls on certain major sources were determined to be either not economically feasible or not technologically feasible. Table A-4 provides additional detail on the non-ACT major emission source.

3.2.1.1 Major Sources

This RACT SIP revision and concurrent proposed Chapter 117 rulemaking are necessary to ensure NO_X RACT is in place for all major sources in Bexar County. It accomplishes this by extending rules like the existing 30 TAC Chapter 117 NO_X rules to the applicable sources in Bexar County. This SIP revision satisfies major source NO_X RACT requirements for Bexar County at a major source threshold of 100 tpy NO_X. All unit types present at major source sites in the 2019 point source emissions inventory would be subject to RACT through existing Chapter 117 rules or proposed rules included in the concurrent rulemaking, if adopted.

3.3 VOC RACT Determination

3.3.1 30 TAC Chapter 115 VOC Rules

All VOC emission source categories addressed by CTG and ACT documents that exist in Bexar County are controlled by existing rules and the concurrent proposed rulemaking in 30 TAC Chapter 115 (Project No. 2023-116-115-AI) or other EPA-approved regulations that fulfill RACT requirements. Tables A-2 and A-3 provide additional details on the CTG and ACT source categories. This Bexar County analysis of RACT requirements for CTG and ACT source categories for the 2015 moderate SIP revision would satisfy the

requirement to evaluate RACT for all CTG and ACT source categories for the Bexar County 2015 ozone NAAQS nonattainment area according to a moderate classification.

The commission is submitting negative declarations for the following CTG source categories for the Bexar County 2015 ozone NAAQS nonattainment area as part of this proposed SIP revision:

- Fiberglass Boat Manufacturing Materials; standard industrial classification code, (SIC) 3732;
- Manufacture of Pneumatic Rubber Tires, SIC 3011;
- Shipbuilding and Ship Repair Surface Coating Operations, SIC 3731;
- Surface Coating for Insulation of Magnet Wire, SIC 3357; and
- Flat Wood Paneling Coatings, Group II issued in 2006, SIC 2435.

For all non-CTG and non-ACT major VOC emission sources for which VOC controls are technologically and economically feasible, RACT is fulfilled by existing 30 TAC Chapter 115 rules, rules included in the concurrent proposed rulemaking, if adopted, and other federally enforceable measures. Additional information for VOC controls on certain major sources that were determined to be not economically feasible and additional detail on non-CTG and non-ACT major emission sources are provided in Table A-5.

Table A-1: State Rules Addressing NO_x RACT Requirements in ACT Reference Documents

Emission Source Category	ACT Reference Document	State Regulations Fulfilling RACT Requirements
Cement Manufacturing	NO_x Emissions from Cement Manufacturing (EPA-453/R-94-004, March 1994) and NO_x Control Technologies for the Cement Industry: Final Report (EPA-457/R-00-002, September 2000)	§117.3100 – §117.3145
Glass Manufacturing	NO_x Emissions from Glass Manufacturing (EPA-453/R-94-037, June 1994)	§117.400 – §117.456
Industrial, Commercial, and Institutional Boilers	NO_x Emissions from Industrial, Commercial and Institutional Boilers (EPA-453/R-94-022, March 1994)	§117.400 – §117.456
Iron and Steel Mills	NO_x Emissions from Iron and Steel Mills (EPA-453/R-94-065, September 1994)	§117.400 – §117.456
Nitric and Adipic Acid Manufacturing	NO_x Emissions from Nitric and Adipic Acid Manufacturing Plants (EPA-453/3-91-026, December 1991)	No existing nitric or adipic acid manufacturing plants in Bexar County
Process Heaters	NO_x Emissions from Process Heaters (EPA-453/R-93-034, September 1993)	§117.400 – §117.456
Stationary Internal Combustion Engines	NO_x Emissions from Stationary Internal Combustion Engines (EPA-453/R-93- 032, July 1993, Updated September 2000)	§117.400 – §117.456
Stationary Turbines	NO_x Emissions from Stationary Combustion Turbines (EPA-453/R-93- 007, January 1993)	§117.400 – §117.456
Utility Boilers	NO_x Emissions from Utility Boilers (EPA-453/R-94-023, March 1994)	§117.1300 – §117.1356

Table A-2: State Rules Addressing VOC RACT Requirements in CTG Reference Documents

Emission Source Category	CTG Reference Document	State Regulations Fulfilling RACT Requirements
Bulk Gasoline Plants	Control of Volatile Organic Emissions from Bulk Gasoline Plants (EPA-450/2- 77-035, December 1977)	§115.211 – §115.219 (Rule Project 2022-116-115-AI)
Cleaning Solvents	Control Techniques Guidelines for Industrial Cleaning Solvents (EPA- 453/R-06-001, September 2006)	§115.460 – §115.469 (Rule Project 2022-116-115-AI)
Cutback Asphalt	Control of Volatile Organic Compounds from Use of Cutback Asphalt (EPA- 450/2-77-037, December 1977)	§115.510 – §115.519 (Rule Project 2022-116-115-AI)
Fiberglass Boat Manufacturing Materials	Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials (EPA 453/R-08-004, September 2008)	No existing sources meeting the specific CTG category description in Bexar County
Fugitive Emissions	Fugitive Emission Sources of Organic Compounds – Additional Information on Emissions, Emission Reductions, and Costs (EPA-450/3-82-010, April 1982)	§115.352 – §115.359 (Rule Project 2022-116-115-AI)
Gasoline Service Stations	Design Criteria for Stage I Vapor Control Systems - Gasoline Service Stations (EPA-450/R-75-102, November 1975)	§115.221 – §115.229 (Rule Project 2022-116-115-AI)
Graphic Arts	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VIII: Graphic Arts – Rotogravure and Flexography (EPA-450/2-78-033, December 1978)	§115.430 – §115.439 (Rule Project 2022-116-115-AI)
Graphic Arts	Control Techniques Guidelines for Flexible Package Printing (EPA-453/R- 06-003, September 2006)	§115.430 – §115.439 (Rule Project 2022-116-115-AI)
Graphic Arts	Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing (EPA-453/R-06-002, September 2006)	§115.440 – §115.449 (Rule Project 2022-116-115-AI)
Industrial Adhesives	Control Techniques Guidelines for Miscellaneous Industrial Adhesives (EPA 453/R-08-005, September 2008)	§115.470 – §115.479 (Rule Project 2022-116-115-AI)

Emission Source Category	CTG Reference Document	State Regulations Fulfilling RACT Requirements
Natural Gas/Gasoline Processing	Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants (EPA-450/3-83-007, December 1983)	§115.352 – §115.359 (Rule Project 2022-116-115-AI)
Petroleum Dry Cleaners[4]	Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners (EPA-450/3-82-009, September 1982)	No longer included in CTG list
Petroleum Liquid Storage	Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks (EPA-450/2-77-036, December 1977)	§115.110 – §115.119 (Rule Project 2022-116-115-AI)
Petroleum Liquid Storage	Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks (EPA-450/2-78-047, December 1978)	§115.110 – §115.119 (Rule Project 2022-116-115-AI)
Refineries	Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds (EPA-450/2- 77-025, October 1977)	§115.120 – §115.129 §115.131 – §115.139 §115.311 – §115.319 (Rule Project 2022-116-115-AI)
Refineries	Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment (EPA-450/2-78-036, June 1978)	§115.352 – §115.359 (Rule Project 2022-116-115-AI)
Rubber Tires	Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires (EPA-450/2-78-030, December 1978)	No existing major sources in Bexar County (SIC 3011)
Solvent Cleaning	Control of Volatile Organic Emissions from Solvent Metal Cleaning (EPA- 450/2-77-022, November 1977)	§115.412 – §115.419 §115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Control Methods for Surface Coating Operations (EPA-450/2-76-028, November 1976)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)

[4] Petroleum Dry Cleaning Systems (Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners (EPA-450/3-82-009, 1982)) is no longer included in the above list of CTG and ACT guidance documents. On May 16, 2006, the EPA removed this emission source category from the Federal Clean Air Act §183(e) list of products for regulation (71 FR 28320).

Emission Source Category	CTG Reference Document	State Regulations Fulfilling RACT Requirements
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks (EPA-450/2-77-008, May 1977)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume III: Surface Coating of Metal Furniture (EPA-450/2-77-032, December 1977)	§115.450-§115.459 (Rule Project 2022-116-115-AI)
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume IV: Surface Coating for Insulation of Magnet Wire (EPA-450/2- 77-033, December 1977)	No existing major sources in Bexar County
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume V: Surface Coating of Large Appliances (EPA-450/2-77-034, December 1977)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VI: Surface Coating of Miscellaneous Metal Parts and Products (EPA-450/2-78-015, June 1978)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VII: Factory Surface Coating of Flat Wood Paneling (EPA-450/2-78-032, June 1978)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Control Technique Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating) (61 FR 44050, August 27, 1996)	No existing major sources in Bexar County (SIC 3731)
Surface Coating	Guideline Series: Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations (EPA-453/R-97-004, December 1997) (see also 59 FR 29216, June 6, 1994)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Control Techniques Guidelines for Flat Wood Paneling Coatings (EPA-453/R-06-004, September 2006)	No existing sources in Bexar County
Surface Coating	Control Techniques Guidelines for Paper, Film, and Foil Coatings (EPA 453/R-07-003, September 2007)	§115.450 – §115.459 (Rule Project 2022-116-115-AI)
Surface Coating	Control Techniques Guidelines for Large Appliance Coatings (EPA 453/R-07-004, September 2007)	§115.450 – §115.459 (Rule Project 2022-116-115-AI)

Emission Source Category	CTG Reference Document	State Regulations Fulfilling RACT Requirements
Surface Coating	Control Techniques Guidelines for Metal Furniture Coatings (EPA 453/R- 07-005, September 2007)	§115.450 – §115.459 (Rule Project 2022-116-115-AI)
Surface Coating	Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (EPA 453/R-08-003, September 2008)	§115.450 – §115.459 (Rule Project 2022-116-115-AI)
Surface Coating	Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings (EPA 453/R-08-006, September 2008)	§115.450 – §115.459 (Rule Project 2022-116-115-AI)
Synthetic Organic Chemical Manufacturing Industry	Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products (EPA-450/2- 78-029, December 1978)	§115.531 – §115.539 (Rule Project 2022-116-115-AI)
Synthetic Organic Chemical Manufacturing Industry	Control of Volatile Organic Compound Emissions from Manufacture of High- Density Polyethylene, Polypropylene, and Polystyrene Resins (EPA-450/3-83- 008, November 1983)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)
Synthetic Organic Chemical Manufacturing Industry	Control of Volatile Organic Compound Fugitive Emissions from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment (EPA-450/3-83-006, March 1984)	§115.352 – §115.359 (Rule Project 2022-116-115-AI)
Synthetic Organic Chemical Manufacturing Industry	Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry (EPA-450/3-84- 015, December 1984)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)
Synthetic Organic Chemical Manufacturing Industry	Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in Synthetic Organic Chemical Manufacturing Industry (EPA-450/4-91-031, August 1993)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)
Tank Trucks	Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals (EPA- 450/2-77-026, October 1977)	§115.211 – §115.219 §115.221 – §115.229 (Rule Project 2022-116-115-AI)
Tank Trucks	Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems (EPA-450/2- 78-051, December 1978)	§115.211 – §115.219 §115.234 – §115.239 (Rule Project 2022-116-115-AI)

Emission Source Category	CTG Reference Document	State Regulations Fulfilling RACT Requirements
Vegetable Oil Manufacturing[5]	Control of Volatile Organic Emissions from Manufacture of Vegetable Oils (EPA-450/2-78-035, June 1978)	No existing sources in Bexar County (SIC 2046 and 2076)
Wood Furniture Manufacturing	Guidelines Series: Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations (EPA-453/R-96-007, April 1996) (see also 61 FR 25223, May 20, 1996 and 61 FR 50823, September 27, 1996)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)

[5] The CTG for the manufacturing of vegetable oils was published in June 1978 (see EPA–450/2–78– 035) but in a March 1980 guidance document, entitled ''Guidance for the Control of Volatile Organic Compounds Emitted by Ten Selected Source Categories,'' the EPA advised that the ''states are not required, at this time, to develop regulations for the vegetable oil manufacturing industry.'' The EPA guidance has not been revised since the March 1980 guidance. The EPA considers the vegetable oil CTG as only guidance for states when they need to develop attainment plans in nonattainment areas. Therefore, it is excluded in Table A-1.

Table A-3: State Rules Addressing VOC RACT Requirements in ACT Reference Documents

Emission Source Category	ACT Reference Document	State Regulations Fulfilling RACT Requirements
Agricultural Pesticides	Control of Volatile Organic Compound Emissions from the Application of Agricultural Pesticides (EPA-453/R-92-011, March 1993)	TCEQ does not regulate the use of agricultural pesticides and this ACT document does not give presumptive controls; therefore, no RACT determination is required for this source category
Batch Processes	Alternative Control Techniques Document: Control of Volatile Organic Compound Emissions from Batch Processes (EPA-453/R-93-017 or EPA-453/R-93-020, February 1994)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)
Cleaning Solvents	Alternative Control Techniques Document: Industrial Cleaning Solvents (EPA-453/R-94-015, February 1994)	§115.412 – §115.419 §115.420 – §115.429 (Rule Project 2022-116-115-AI)
Commercial Bakeries	Alternative Control Techniques Document: Bakery Ovens (EPA-453/R- 92-017, December 1992)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)
Ethylene Oxide Sterilization/Fumigation Operations	Alternative Control Techniques Document: Ethylene Oxide Sterilization/Fumigation Operations (EPA-450/3-89-007, March 1989)	Emissions from this source category are regulated by MACT per §113.200
Graphic Arts	Alternative Control Techniques Document: Offset Lithographic Printing (EPA-453/R-94-054, June 1994) and Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (EPA-453/D-95- 001, September 1993)	§115.440 §115.449 (Rule Project 2022-116-115-AI)
Industrial Wastewater	Industrial Wastewater Alternative Control Techniques (Draft CTG, EPA- 453/D-93-056, September 1992, was not finalized by issued as ACT in April 1994, and consists of cover memo with option tables and draft CTG)	§115.142 – §115.149 (Rule Project 2022-116-115-AI)
Leather Tanning and Finishing Operations	Alternative Control Technology Document: Leather Tanning and Finishing Operations (EPA-453/R-93- 025)	No existing major sources in Bexar County (SIC 3111)

Emission Source Category	ACT Reference Document	State Regulations Fulfilling RACT Requirements
Petroleum Liquid Storage	Alternative Control Techniques Document: Volatile Organic Liquid Storage in Floating and Fixed Roof Tanks (EPA-453/R-94-001, January 1994)	§115.110 – §115.119 (Rule Project 2022-116-115-AI)
Plywood Veneer Dryers	Control Techniques for Organic Emissions from Plywood Veneer Dryers (EPA-450/3-83-012, May 1983)	No existing major sources in Bexar County (SIC 2435 and 2436)
Process Vents	Alternative Control Technology Document: Organic Waste Process Vents (EPA-450/3-91-007, December 1990)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)
Solvent Cleaning	Alternative Control Technology Document: Halogenated Solvent Cleaners (EPA-450/3-89-030, August 1989)	§115.412 – §115.419
Surface Coating	Reduction of Volatile Organic Compound Emissions from the Application of Traffic Markings (EPA- 450/3-88-007, August 1988). The Architectural and Industrial Maintenance coatings national rule issued in 1998 includes limits for traffic coatings and superseded the ACT	Emissions from this source category are regulated by the Architectural and Industrial Maintenance national rule
Surface Coating	Reduction of Volatile Organic Compound Emissions from Automobile Refinishing (EPA-450/3- 88-009, October 1988, NTIS No PB-89-148-282)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Surface Coating	Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts (EPA- 453/R-94-017, February 1994)	§115.450 – §115.459 (Rule Project 2022-116-115-AI)
Surface Coating	Alternative Control Technology Document: Surface Coating Operations at Shipbuilding and Ship Repair Facilities (EPA-453/R-94-032, April 1994)	No existing sources in Bexar County (SIC 3731)
Surface Coating	Alternative Control Techniques Document: Automobile Body Refinishing (EPA-453/R-94-031, April 1994) (Note: a national rule for auto- body refinishing was issued in 1998 after the ACT)	§115.420 – §115.429 (Rule Project 2022-116-115-AI)
Synthetic Organic Chemical Manufacturing Industry	Control of VOC Emissions from Polystyrene Foam Manufacturing (EPA-450/3-90-020, September 1990)	§115.120 – §115.129 (Rule Project 2022-116-115-AI)

Table A-4: State Rules Addressing NO_x RACT Requirements for Major Emission Sources in Bexar County

RN	Company	SIC	SIC Description	2019 Actual tpy	Rules Addressing RACT	Notes
RN100211507	CAPITOL AGGREGATES INC	3241	Cement	570.47	§117.3100 – §117.3145 (Rule Project No.2023-114-117-AI)	Cement kiln, Diesel engines
RN100217975	CITY PUBLIC SERVICE BOARD	4911	Electric Services	3,752.0	Subchapter C Division 2 (Rule Project No.2023-114-117-AI) 117.3000/117.3005	Boilers, Diesel engines
RN100217439	CITY PUBLIC SERVICE BOARD	4912	Electric Services	16.72	Subchapter C Division 2 (Rule Project No.2023-114-117-AI)	Turbines, Diesel engines
RN100668573	ENTERPRISE HYDROCARBONS LP	1321	Natural Gas Liquids	95.59	Subchapter B Division 2 (Rule Project No.2023-114-117-AI)	Turbines, Diesel engines, Process heaters
RN100542729	US DEPT OF AIR FORCE	9711	National Security	29.95	Subchapter B Division 2 (Rule Project No.2023-114-117-AI)	Boilers, Diesel engines
RN100217835	CITY PUBLIC SERVICE BOARD	4911	Electric Services	1,108.5	Subchapter C Division 2 (Rule Project No.2023-114-117-AI) 117.3010/117.3020	Boilers, Turbines, Diesel engines
RN100220474	ALAMO CEMENT COMPANY	3241	Cement	2,303.0	§117.3100 – §117.3145 (Rule Project No.2023-114-117-AI)	Cement kiln
RN100222983	SOUTHWEST RESEARCH INSTITUTE	8733	Noncommercial Research Organizations	140.92	Subchapter B Division 2 (Rule Project No.2023-114-117-AI)	Engines
RN102459393	INTERTEK AUTOMOTIVE RESEARCH	8734	Testing Laboratories	27.75	Subchapter B Division 2 (Rule Project No.2023-114-117-AI)	Engines
RN101966075	UNITED SERVICES AUTOMOBILE ASSOCIATION	6399	Insurance Carriers	11.10	Subchapter B Division 2 (Rule Project No.2023-114-117-AI)	Engines, Boilers, Steam generating units

Table A-1: State Rules Addressing VOC RACT Requirements for Major Emission Sources in Bexar County

RN	Company	SIC	SIC Description	2019 Actual tpy	Rules Addressing RACT	Notes
RN100211507	CAPITOL AGGREGATES INC	3241	Cement	34.60	§115.110-§115.119; §115.221-§115.229 (Rule Project 2022-116-115-AI)	Storage tanks, Stage I
RN100217975	CITY PUBLIC SERVICE BOARD	4911	Electric Services	85.47	§115.110-§115.119; §115.121-§115.129; §115.211-§115.219; §115.411-§115.419 (Rule Project 2022-116-115116-115-AI)	Storage tanks, Vent gas, Loading, Degreasing
RN100217439	CITY PUBLIC SERVICE BOARD	4912	Electric Services	0.75	§115.110-§115.119; §115.120-§115.129 (Rule Project 2022-116-115116-115-AI)	Storage tanks, Vent gas
RN101485183	THE SAN ANTONIO REFINERY LLC	2911	Petroleum Refining	101.10	§115.110-§115.119; §115.211-§115.219; §115.311-§115.319 (Rule Project 2022-116-115116-115-AI)	Storage tanks, Loading, Process unit turn around
RN100217835	CITY PUBLIC SERVICE BOARD	4911	Electric Services	55.55	§115.110-§115.119; §115.221-§115.229; §115.410-§115.419 (Rule Project 2022-116-115-AI)	Storage tanks, Stage I, Degreasing
RN100222983	SOUTHWEST RESEARCH INSTITUTE	8733	Noncommercial Research Organizations	58.28	§115.110-§115.119; §115.211-§115.219 (Rule Project 2022-116-115-AI)	Storage tanks, Loading Engines, 40 CFR 63 Subpart ZZZZ
RN100221373	ARCONIC TECHNOLOGIES LLC	3353	Aluminum Sheet Plate and Foil	5.86	§115.120-§115.129; §115.211-§115.219 (Rule Project 2022-116-115-AI)	Vent gas, Loading, 40 CFR 63 Subpart RRR
RN100215854	BOEING COMPANY	3721	Aircraft	39.48	§115.120-§115.129; §115.211-§115.219; §115.411-§115.419; §115.420-§115.429 (Rule Project 2022-116-115-AI)	Vent gas, Loading, Degreasing, Aerospace

RN	Company	SIC	SIC Description	2019 Actual tpy	Rules Addressing RACT	Notes
RN105433890 previously RN104086673	TOYOTA MOTOR MANUFACTURING TEXAS INC	3711	Motor Vehicles and Car Bodies	452.94	§115.110-§115.119; §115.211-§115.219; §115.221-§115.229; §115.411-§115.419 (Rule Project 2022-116-115-AI)	Storage tanks, Loading, Stage I, Degreasing